DISCOVER-AQ Outlook - September 7, 2013

Thunderstorm activity is widespread today, moving inland from the coast during the morning and becoming extensive over the northern suburbs of Houston by early afternoon. Well-defined easterly flow was evident at the surface. Winds turned southeasterly by 2 PM at some locations.

On Sunday the surface high moves to the east and scattered thunderstorms again will develop offshore in the early AM and move inland throughout the day. Easterly winds near the surface will persist and perhaps be stronger than today. This will tend to dilute the Houston emissions and not allow extensive ozone buildup during the day. The low-level ozone plume (what there is) will be advected primarily to the west. Transport from Louisiana will take place above the surface layer during the day and will pass over Houston by late afternoon and into the evening.

Monday we again expect scattered thunderstorms, but perhaps not as extensive as today. Surface winds will turn to the southeast. Looking farther ahead, there is increased chance of more extensive cloudiness on Tuesday in response to the strong easterly wave approaching the Texas and Mexican coast. However, drying is expected by the middle to latter part of next week. Cloud conditions may be better off the Louisiana coast than in Houston on Tuesday, perhaps allowing a King Air flight in collaboration with the GEO-CAPE ship.